

## REMARKS

5 This amendment is responsive to the Office Action dated  
March 11, 2004.

With regard to the 35 USC 112 specification and drawing  
objections, the following changes have been made:

10 With regard to the use of reference labels "a..n",  
applicant notes that the paragraph of page 20 line 23 has  
been amended to indicate that the drawing figures illustrate  
the case where  $n=8$ , and the subscripts have been modified to  
make reference to "a..h", which are now in agreement with  
15 the amended Figure 4-1, which now has subscripts in the  
range "a..h". The specification makes clear that the device  
may have any plurality  $n$  of electron guns, beam tunnels, and  
associated structures.

With regard to the absence of subscripts on repeated  
20 structures 102 and 106, applicant notes that the  
specification has been amended to make reference to the  
structures by subscript only. Applicant also notes that  
figure 4 is a section view through structures having  
suffixes "a" and "e".

25 With regard to the examiner's suggestion of  
substituting the word --material (i.e. iron)-- in reference  
Amendment for: Electron Gun for Multi-Beam Klystron by Ives et al. s/n 09/629,364

to magnetic material 170 on page 23 line 19, applicant has amended the specification accordingly.

With regard to the "emitting surface 101 of cathode 102" on the replacement paragraph of page 25 line 7 &  
5 8, applicant has amended drawing 6c to show emitting surface 101, and has added a sentence to the replacement paragraph reviewing the function of a prior art cathode in a traveling wave tube.

With regard to the addition of the word "materials"  
10 after the word "iron" on the replacement paragraph starting on page 16 line 14, applicant has assumed examiner was referencing the paragraph of page 26 line 14, and incorporated examiners suggestions.

With regard to the reference to "permanent magnet 232  
15 (shown in figure 8)", in the paragraph of page 26 line 17, applicant has amended this reference to --permanent magnet 240 (shown in figure 8)--.

With regard to claim 27, "additional magnetic field correctors" are now coupled by function and location to the  
20 magnetic circuit and cathode side of electron beam entrance, respectively, in the amended claim 27.

With regard to the 35 USC 103(a) rejection of claims 8, 12, 14, 25/8 over Mourier in view of Nevins, applicant has amended claim 8 to remove the reference to "near said  
25 cathode". Applicant has replaced the word "near" with examiners suggestion of --adjacent--, and further restricted

the location of the magnetic field corrector to between the electron gun assembly and the beam entrance, as shown in figure 4. This limitation in location clearly distinguishes the magnetic field corrector of the present invention from the corrector of Mourier, where the magnetic field correctors are either pairs of correctors 38, 36 of figure 4, or a single medial corrector 44 of figure 5 of Mourier. Mourier equations of derivation col 3 line 55 and col 4 line 25 (note typographical omissions of integral sign operating over range A to A') teach correcting magnetic field generators which result in either a pair of correctors at both ends 36, 38 of figure 4, or a single corrector 44 at the median of figure 5. Mourier explicitly states on column 4 line 31-35:

*It is thus seen that the compensation for the azimuthal drift ends, in the former case, in conditions at the ends on the trajectories, and in the second case, in mean conditions on the trajectories. Besides, these conditions are compatible.*

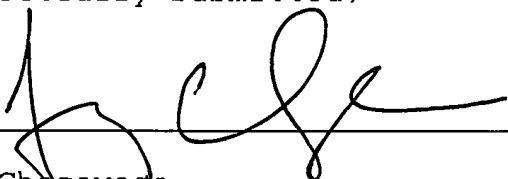
This summary by Mourier clearly declares that the satisfaction of these equations results in either two opposing correctors at the ends as shown in figure 4, or a single corrector in the middle as shown in figure 5, or combinations of these symmetrical structures. The examiner's example of a single corrector 38 on page 5 of the office action violates Mourier's teaching as explicitly stated by Mourier. Nevertheless, applicant has amended

claim 8 to limit the extent of the field corrector to  
operate in an extent on the cathode side of the electron  
beam entrances, which is further distinguishable from  
Mourier, and clearly shown in the applicant's existing  
5 drawings.

With this amendment, this application is in condition  
for allowance. Examiner is advised that agent Chesavage may  
10 be reached by telephone at 650-619-5270, or via e-mail at  
patents@chesavage.com

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Respectfully Submitted,

  
A handwritten signature in black ink, appearing to read 'J. Chesavage', is written over a horizontal line.

Jay Chesavage

Registration No. 39,137

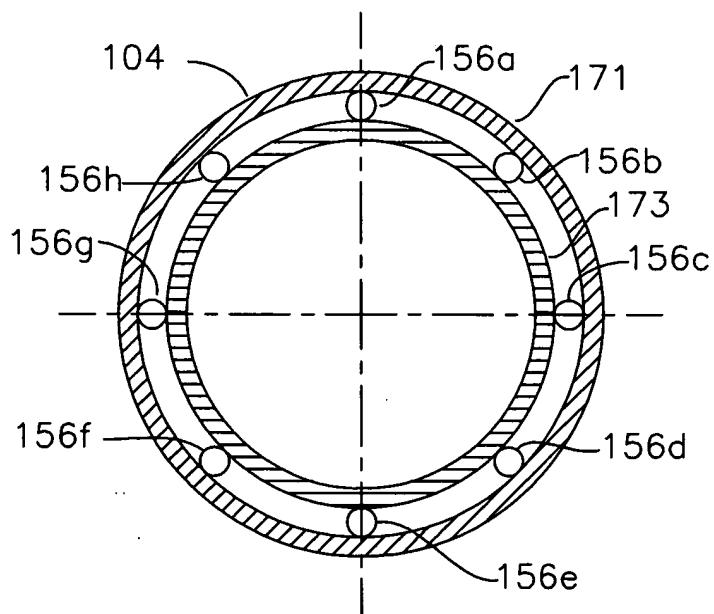




Figure 6b

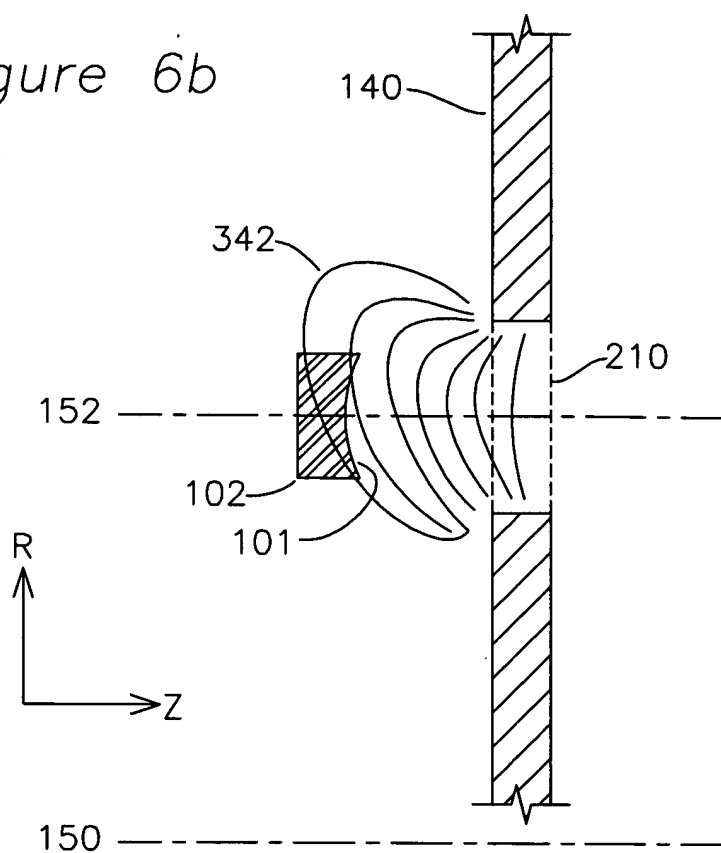


Figure 6c

